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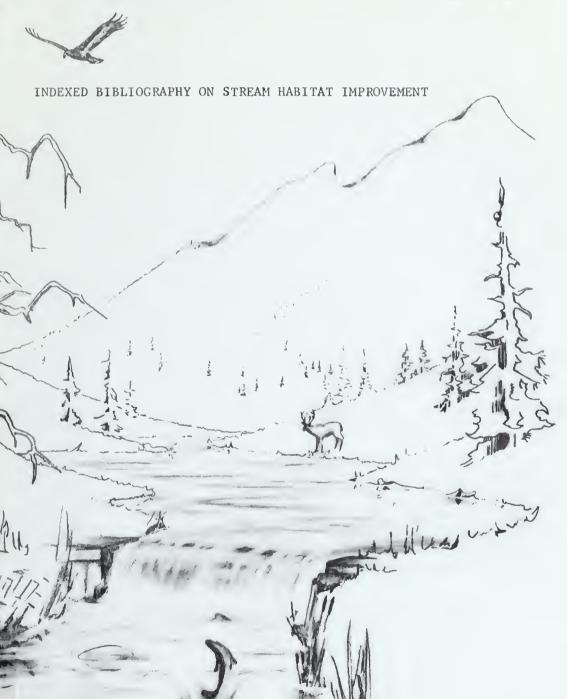
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INDEXED BIBLIOGRAPHY ON STREAM HABITAT IMPROVEMENT

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The literature on stream habitat improvement is plentiful but scattered in state publications, completion reports for federal aid projects, popular state conservation magazines, journals outside the field of fisheries and some are published in the common fisheries journals. The main purpose of this bibliography was to compile this diverse literature into a ready reference source for researchers and managers.

The 390 references were placed alphabetically by author and numbered consecutively. A concise index of 20 key subjects categorizes the references by number for quick review. Most references have been placed under the major key subject to which they are applicable. Some references, however, are pertinent to several key subjects and have been categorized accordingly.

Unpublished references or those that are not widely distributed have the sponsoring agency and location in the citation. We have included selected references that may not be involved with stream habitat improvement, per se, but that are applicable to this topic such as fish ecology and behavior and guidelines for maintaining, improving, or protecting stream habitats.

The maintenance, restoration, and protection of watersheds, that are influenced by economical, political, and sociological pressures, may be more beneficial to the improvement of stream habitats than manmade improvements. Since many variables influence decisions regarding the management of watersheds, we have included selected references under the subject of "Environmental Planning" that should be valuable in land use planning. In addition, selected references have been included under the subject of

"Guidelines" that provide insight into the biological, chemical, and physical factors that influence stream habitats. Finally, we have included a number of references pertaining to "Techniques" that will be useful to managers in managing stream habitats and fisheries.

Although a rather thorough search of the literature was made, there will be, no doubt, omissions since the references were widely scattered. We believe, however, that this bibliography will serve as a useful starting place for anyone who has an interest in stream habitat improvement. In addition, we hope that it will also identify gaps in knowledge that is necessary for thorough evaluation of past practices and stimulate future studies that will allow the establishment of effective priorities and procedures for the improvement or management of stream habitats.

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- 1. ACMRR/IABO Working Party on Ecological Indices of Stress to Fishery Resources.
 1976. Indices for measuring responses of aquatic ecological systems to
 various human influences. Food Agri. Org. UN, Fish. Tech. Pap.
 No. 151. 66 pp.
- 2. Aitken, W.W. 1935. Iowa stream improvement work. Trans. Am. Fish. Soc. 65 (1935): 322-323
 - Alexander, H.E. 1960. Stream values, recreational use, and preservation.

 Trans. 25th N. Am. Wild. Nat. Resources Conf.: 192-201.
- 4. Allen, K.R. 1969. Distinctive aspects of the ecology of stream fishes: a review. J. Fish. Res. Bd. Canada 26: 1429-1438.

3.

5.

6.

- Alley, D., D.H. Dettman, H.W. Li, and P.B. Moyle. 1977. Habitats of native fishes in the Sacramento River Basin. Pages 112-113 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- Ames, C.R. 1977. Wildlife conflicts in riparian management: grazing.
 Pages 49-51 <u>in</u> R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 7. Anderson, B.W., R.W. Engel-Wilson, D. Wells, and R.D. Ohmart. 1977.
 Ecological study of southwestern riparian habitat: techniques and data applicability. Pages 146-155 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 8. Anderson, E. 1966. Natural areas. J. Range Manage. 19: 239-242.
- Anderson, H.W. 1954. Suspended sediment discharge as related to streamflow, topography, soil, and land use. Trans. Am. Geophys. Union 35: 268-281.
- 10. Anonymous. 1960. Ten-year stream clearance program is approved by Wildlife Conservation Board. Outdoor California 21(9-10): 1,3.
- 11. Anonymous. 1963. Restoring salmon-steelhead streams. Outdoor California 24(1): 3-4.
- 12. Apmann, R.P. and M.B. Otis. 1955. Sedimentation and stream improvement. New York Fish and Game J. 12(2): 117-126.
- 13. Armour, C.L. (1977) Effects of deteriorated range streams on trout. U.S. Dep. Int., Bur. Land Manage., Boise, ID. 7 pp.

- 14. Archer, D.L. 1972. Fisheries investigations in lakes and streams: Evaluation of stream improvement work. Federal Aid Proj. F-010-R-07, Job D, South Carolina Wildlife Resources Dept., Columbia, 15 pp.
- 15. Arnold, Arnold, and Associates and Dames and Moore. 1975. Logging roads and protection of water quality. U.S. Environ. Protect. Agency, Seattle, Wash., EPA 910/9-75-007. 273 pp.
- 16. Bachman, R. 1958. The ecology of four north Idaho trout streams with reference to the influence of forest road construction. M.S. Thesis, Univ. Idaho, Moscow. 97 pp.
- 17. Bagley, M.D., C.A. Kroll, and K. Clark. 1973. Aesthetics in environmental planning. U.S. Environ. Agency, Socioecon. Environ. Stud. Ser., EPA-600/5-73-009. 187 pp.
- 18. Bagley, J.M. (Chairman) et al. 1975. Water resources and uses. Chapter II-H in J.M. neuhold, D.E. Herrick, and D.T. Patten (Directorate), Rocky Mountain Environmental Research Priorities in the Rocky Mountain Region, Ecology Center, Utah State Univ., Logan., 52 pp.
- 19. Barkley, P.W. and D.W. Seckler. 1972. Economic growth and environmental decay: the solution becomes a problem. Harcourt, Brace, Jovanovich, Inc., New York. 193 pp.
- 20. Barkuloo, J.M. 1966. Stream improvement investigations: Stream habitat modification and fish population manipulation. Federal Air Proj. F-019-R-02, Job 1, Florida Game and Fresh Water Fish Comm. Tallahassee, 9 pp.
- 21. Bean, M.J. 1977. The evolution of national wildlife law. Council of Environ. Quality, Washington, D.C. 484 pp.
- 22. Beattie, B.R., et. at. 1971. Economic consequences of interbasin water transfer. Oregon State Univ., Agr. Exp. Sta., Corvallis, Oregon, Tech. Bull. 116. 82 pp.
- 23. Behnke, R.J. 1977. Livestock grazing impact on stream fisheries: problems and suggested solutions. <u>In</u> Symposium on livestock interactions with wildlife, fisheries, and their environment, U.S. Dep. Agri., Forest Serv., Sparks, Nevada. 10 pp.
- 24. Bell, R. 1956. Aquatic and marginal vegetation of strip mine waters in southern Illinois. Trans. Illinois Acad. Sci. 48: 85-91.
- 25. Binns, N.A. 1976. Evaluation of habitat quality in Wyoming trout streams.

 Paper presented at Annu. Meet., Am. Fish. Soc., Dearborn, Michigan,
 Sept., 1976. 33 pp. (Typewritten)

- 26. Binns, N.A. and F.M. Eiserman. 1977. A predictive model for quantification of fluvial trout habitat. J. Colorado-Wyoming Acad. Sci. 9(1): 8-9.
- 27. Biswas, A.K., and R.W. Durie. 1971. Sociological aspects of water development. Water Resources Bull. 7(6):1137-1143.
- 28. Biswell, H.N. and A.M. Schultz. 1958. Effects of vegetation removal on spring flow. California Fish and Game (44(3): 211-230.
- 29. Bjornn, T.C. 1965. The production of juvenile steelhead trout in an Idaho stream. Annu. Conf. Western Assoc. State Game and Fish Comm., Proc. 45: 210-216.
- 30. Bjornn, T.C., M.A. Brusven, M.P. Molnau, J.H. Milligan, R.A. Klamt, E. Chacho, and C. Schaye. 1977. Transport of granitic sediments in streams and its effects on insects and fish. College Forestry, Willdl. and Range Sci., Univ. Idaho, Moscow, Bull. No. 17. 43 pp.
- 31. Black, H.C. (Ed) 1969. Wildlife and reforestation in the Pacific Northwest: a symposium. School of Forestry, Oregon State Univ., Corvallis. 92 pp.
- 32. Blahm, T.H. 1963. Passage of salmon fingerlings through small tunnels. Trans. Am. Fish. Soc. 92(3): 302-303.
- 33. Boreman, J. 1974. Effects of stream improvement on juvenile rainbow trout in Cayuga Inlet, New York. Trans. Am. Fish. Soc. 103(3): 637-641.
- 34. Boussu, M.F. 1954. Relationship between trout populations and cover on a small trout stream. J. Wild. Manage. 18(2): 229-239.
- 35. Branson, C. and J.R. Owens. 1970. Plant cover, runoff, sediment yield relationships on Mancos Shale in western Colorado. Water Resour. Res. 6: 783-790.
- 36. Brazier, J.R. and G.W. Brown. 1973. Buffer strips for stream temperature control. School Forest., Oregon State Univ., Corvallis. Res. Pap. 15. 9 pp.
- 37. Brown, D.E., C.H. Lowe, and J.F. Hausler. 1977. Southwestern riparian communities: their biotic importance and management in Arizona.

 Pages 201-211 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 38. Brown, D.E., N.B. Carmony, and R.M. Turner. 1977. Inventory of riparian habitats. Pages 10-13 in R.R. Johnson and D.A. Jones, Tech. Coord. Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.

- 39. Brown, E.C. 1922. Adjustment of environment vs. stocking to increase the productivity of fish life. Trans. Am. Fish. Soc. 52(1922): 131-145.
- 40. Brown, G. and J. Krygier. 1967. Changing water temperatures in a small mountain stream. J. Soil and Water Conserv. 22(6): 242-244.
- 41. Brown, G.W. 1970. Predicting the effect of clearcutting on stream temperature.
 J. Soil and Water Conserv. 25(1): 11-14.
- 42. Brown, R.J. and J. Mickey Jr., 1974. Stabilization of erosion on a mountainous road construction project. Pages 87-92 in Proceedings of a symposium on trout habitat research and management, U.S. Forest Serv., Southeast. Forest Exp. Sta., Asheville, N.C.
- 43. Brusven, M.A., F.J. Watts, R. Leudtke and T.L. Kelley. 1974. A model design for physical and biotic rehabilitation of a silted stream. Final Rep., Water Resources Res. Inst., Office of Water Res. Tech., Washington, D.C. Proj. OWRT-A-032-IDA. 107 pp.
- 44. Brynildson, O.M., A.R. Ensign, and E.L. Cooper. 1955. What makes a good trout stream. Wisconsin Conserv. Bull. 20(5): 12-15.
- Buckhouse, J.C. and G.F. Gifford. 1976. Grazing and debris burning on pinyon-juniper sites some chemical water quality implications.

 J. Range Manage. 29(4): 299-301.
- 46. Bulkley, R.V. et al. 1976. Warmwater stream alteration in Iowa: extent, effects on habitat, fish, and fish food, and evaluation of stream improvement structures. U.S. Fish and Wildl. Serv., Office Biol. Serv., FWS/OBS-76/16. 39 pp.
- Bureau of Land Management. 1968. Stream preservation and improvement. U.S. Dep. Int., Bur. Land Manage., Washington, D.C. Manual 6760 Release No. 6-12. 63 pp.
- 48. Bureau of Land Management. 1974. Livestock grazing management on national resource lands. U.S. Dep. Int., Bur. Land Manage., Washington, D.C. Final Environmental Impact Statement with 2 Supplements. Various pagination.
- 49. Burghduff, A.E. 1934. Stream improvement. California Fish and Game 20(2): 113-118.
- 50. Burkhard, W.T. 1967. Effects of channelization of the trout fishery of Tomichi Creek. Federal Aid Proj. F-026-R-04, Job 6, Colorado Game, Fish and Parks Dept. Denver. 9 pp.

- 51. Burns, J.W. 1966. Fish screens. Pages 156-161 in A. Calhoun, ed., Inland Fisheries Management, California Fish and Game Dep., Sacramento.
- 52. Burwell, D. 1971. Prevention of debris accumulation in streams by uphill felling. Pages 118-120 in J.T. Krygier and J.D. Hall, Directors, Proc. Symp. Forest Land Uses and Stream Environ., Oregon State Univ., Corvallis.
- Bustard, D.R. and D.W. Narver. 1975. Preferences of juvenile coho salmon (Oncorhynchus Kisutch) and cutthroat trout (Salmo clarki) relative to simulated alteration of winter habitat. J. Fish. Res. Bd. Canada 32(5): 681-687.
- 54. Butler, R.L. and V.M. Hawthorne. 1968. The reactions of dominant trout to changes in overhead artificial cover. Trans. Am. Fish. Soc. 97(1): 37-41.
- 55. Cairns, J. Jr., J.S. Crossman, K.L. Dickson, and E.E. Herricks. 1971. The recovery of damaged streams. ASB Bull. 18(3): 79-106.
- 56. Calhoun, A.J. 1966. Habitat protection and improvement. Pages 40-48
 in A.J. Calhoun, ed., Inland Fisheries Management, California Dep.
 Fish and Game, Scaramento.
- 57. Call, C.H. Jr. 1974. An evaluation of in-stream structures designed to provide fish habitat. M.E. Project, Brigham Young Univ., Provo, Utah. 108 pp.
- 58. Campbell, C.J. 1966. Protecting fish habitat from progress. Annu. Conf. Western Assoc. State Game Fish Comm., Proc. 50: 308-311.
- 59. Campbell, C.J. 1970. Ecological implications of riparian vegetation Management. J. Soil Water Conserv., 25(2): 49-52.
- 60. Carlson, E.J. 1967. Baffle gate method for cleaning salmon beds in canals. Proc. 12th Congress, Int. Assoc. Hydraulic Res. 3: 266-275.
- 61. Carlson, J.R. and J.O. Preston. 1976. Purpleosier willow for stream bank erosion control. Am. Nurseryman 144(2): 12, 73.
- 62. Carothers, S.W. 1977. Importance, preservation, and management of riparian habitat. Pages 2-4 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 63. Casebeer, R.L. 1957. Taking a look at a habitat improvement program.
 Annu. Conf. Western Assoc. State Game and Fish Comm., Proc. 37: 265-270.

- 64. Chapman, D.W. 1966. Food and space as regulators of salmonid populations in streams Am. Naturalist 100 (913): 345-357.
- 65. Clark, O.H. 1948. Stream improvements in Michigan. Trans. Am. Fish. Soc. 75(1945): 270-280.
- 66. Clay, C.H. 1961. Design of fishways and other fish facilities. Ontario Dep. Fish., Ottawa, Ontario, Canada. 301 pp.
- 67. Cline, F.R. and E. Koehm. 1974. Gabions used in California flood control. Civ. Eng. (NY) 44(3): 68-70.
- 68. Committee on Water Quality Criteria. 1972. Water quality criteria 1972. U.S. Environ. Protect. Agency, Washington, D.C. 591 pp.
- 69. Conard, S.G., R.L. MacDonald, and R.F. Holland. 1977. Riparian vegetation and flora of the Sacramento Valley. Pages 106-107 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 70. Cooper, C.O. and T.A. Wesche. 1976. Stream channel modification to enhance trout habitat under low flow conditions. Water Resources Res. Inst., Office of Water Res. Tech., Washington, D.C. Rept. No. Ser-58. 117 pp.
- 71. Copeland, O.L. 1963. Land use and ecological factors in relation to sediment yields. Pages 72-84 in Second Fed. Inter-Agency Sedimentation Conf., Proc., U.S. Dept. Agri., Misc. Publ. 970.
- 72. Cordone, A. and K. Kelley. 1961. The influence of inorganic sediment on the aquatic life of streams. California Fish Game 47(2): 189-228.
- 73. Cormack, R. 1961. Stream improvement. Land, Forests and Wild. 3(5): 3-13.
- 74. Craddock, G.W. and C.K. Pearse. 1938. Surface runoff and erosion on granitic mountain soils of Idaho as influenced by range cover, soil disturbance, slope, and precipitation intensity. U.S. Dep. Agri., Circ. 482. 20 pp.
- 75. Crews, J.E. 1970. Bank stabilization in Susquehanna River Basin. Am. Soc. Civil Eng., J. Waterways Harbors Div. 96 (WW1): 87-95.
- 76. Cronemiller, F.P. 1955. Making new trout streams in the Sierra Nevada.
 Pages 583-586 in Water, U.S. Dep. Agri., Yearbook of Agriculture.
- 77. Cuinat, R., J. Dumas, J.A. Timmermans, J. Arrignon, and G. Tuffery, Ecological diagnosis in salmonid streams -- method and example. Food Agri. Org. UN, EIFAC Tech. Pap. No. 22. 133 pp.

- 78. Czapowsky, M.M. 1976. Annotated bibliography of the ecology and reclamation of drastically disturbed areas. U.S. Dep. Agri., Forest Serv., Gen. Tech. Rep. NE-21. 98 pp.
- 79. Davis, G.A. 1977. Management alternatives for the riparian habitat in the southwest. Pages 59-67 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 80. Davis, H.S. 1934. The purpose and value of stream improvement. Trans. Am. Fish. Soc. 64(1934): 63-67.
- 81. Davis, H.S. 1935. Methods for improvement of streams. U.S. Bur. Fish., Memo. 1-133.
- 82. Davis, H.S. 1936. Stream improvement in National Forests. Proc. 1st N. Am. Wildl. Conf.: 447-453.
- B3. Davis, H.S., A.S. Hazzard, and C. MacIntyre. 1935. Methods for the improvement of streams. U.S. Bur. Fish. Memo. 1-133. 27 pp.
- 84. Deibler, O.M. 1936. Stream improvement in Pennsylvania and its results. Trans. 1st N. Am. Wildl. Conf.: 439-443.
- 85. DeRoche, S.E. 1967. Survival study of brook trout in Branch Brook.
 Federal Aid Proj. F-015-R, Maine Dep. Inland Fish.and Game, Augusta,
 29 pp.
- 86. Dewsnup, R.L. 1971. Legal protection of instream water values. U.S. Nat. Water Comm., Washington, D.C., Rept. NWC-L-71-023. 60 pp.
- 87. Dick-Peddie, W.A. and J.P. Hubbard. 1977. Classification of riparian vegetation. Pages 85-90 in R.R. JOhnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 88. Dissmeyer, G. 1975. Erosion and sediment from forest land uses, management practices and disturbances in the southeastern United States. Pages 1-140 to 1-148 in Third Fed. Inter-Agency Sedimentation Conf., Proc., Denver, CO.
- 89. Dobson, A.T. 1973. Changes in the structure of a riparian community as the result of grazing. N.Z. Ecol. Soc., Proc. 20: 58-64.
- 90. Douglass, J.E. and M.E. Seehorn. 1974. Forest Management impacts on cold water fisheries. Pages 33-46 <u>in Proceedings of a symposium on trout habitat research and management</u>, U.S. Forest Serv., Southeast Forest Exp. Sta., Asheville, N.C.

- 9]. Dove, J.L. 1974. State of the art in design of sediment control structures. Am. Soc. Agr. Eng., Pap. 74-2570. 9 pp.
- 92. Dryden, R.L. and J.N. Stein. 1975. Guidelines for the protection of the fish resources of the Northwest Territories during highway construction and operation. Canadian Dep. Environment, Fish. and Marine Serv., Tech. Rep. Series No. CEN/T-75-1. 32 pp.
- 93. Duff, D.A. 1970. Summary of Rio Nambe stream improvement project. U.S. Dep. Agri., Forest Serv., Santa Fe. 21 pp.
- 94. Duff, D.A. 1977. Livestock grazing impacts on aquatic habitat in Big Creek, Utah. <u>In</u> Symposium on livestock interactions with wildlife, fisheries, and their environments, U.S. Dep. Agri., Forest Serv., Sparks, Nevada. 35 pp. (in press).
- 95. Duff, D. and J. Cooper. 1976. Techniques for conducting stream habitat survey on National Resource Land. U.S. Dep. Int., Bureau Land Manage., Tech. Note T/N 283. 72 pp.
- 96. Dunham, D.K. and A. Collotzi. 1975. The transect method of stream habitat inventory: guidelines and applications. U.S. Dep. Agri., Forest Serv., Ogden, Utah. 98 pp.
- 97. Edminster, F.C., W.S. Atkinson, and A.C. McIntyre. 1949. Streambank erosion control on the Winooski River, Vermont. U.S. Dep. Agri., Circ. No. 837. 54 pp.
- 98. Edwards, C.J., B.L. Griswold, and G.L. White. (1974) An evaluation of stream modification in the Olentangy River, Ohio. Ohio Coop. Fish Res. Unit, Ohio State Univ., Columbus. 20 pp.
- 99. Ehlers, R. 1956. An evaluation of stream improvement devices constructed eighteen years ago. California Fish and Game 42(3): 203-217.
- 100. Eiserman, F.M. 1955. Trout fisheries investigations: Evaluation of stream improvement structures. Federal Aid Proj. F-001-R-03, Job 3, Wyoming Game and Fish Comm., Cheyenne. 40 pp.
- 101. Elser, A.A. 1968. Fish populations of a trout stream in relation to major habitat zones and channel alterations. Trans. Am. Fish. Soc. 97(4): 389-3971.
- 102. Elser, A.A. 1969. Southwestern Montana fisheries study: Evaluation of stream improvement structures on Prickly Pear Creek and the East Gallatin River. Federal Aid Proj. F-009-R-17, Job 5, Montana Fish and Game Dep., Helena, 17 pp.

- 103. Elser, A.A. 1971. Southwestern Montana Fisheries study: Evaluation of stream improvement structures on Prickly Pear Creek and the East Gallatin River. Federal Aid Proj. F-009-R-19, Job 2/A, Montana Fish and Game Dept., Helena. 7 pp.
- 104. Eschmeyer, R.A. 1956. Fish conservation fundamentals, Sport Fishing Institute, Washington, D.C. 30 pp.
- 105. Eschner, A.R. and J. Lon. 1963. Logging and trout: four experimental forest practices and their effect on water quality. Progr./Fish-Cult. 25(2): 59-60.
- 106. Evans, T. 1949. Methods of stream improvement in Minnesota. Unpublished Ms., Minnesota Div. Game and Fish, St. Paul. 54 pp.
- 107. Evans, W. 1964. California restoring its coastal streams for fish with the big cleanup. Outdoor California 12(25): 14-16.
- 108. Everhart, W.H., A.W. Eipper, and W.D. Youngs, 1975. Principles of fishery science. Cornell Univ. Press, Ithaca, N.Y. 288 pp.
- 109. Fajen, O.F. 1970. Fisheries management planning and research: Stream stabilization and improvement at Big Buffalo Creek. Federal Aid Proj. F-001-R-19, Job 1, Missouri Conserv. Comm., Jefferson City, 7 pp.
- 110. Fajen, O.F. 1971. Fisheries management planning and research: Fish population as affected by stream improvements. Federal Aid Proj. F-001-R-20, Job 2/S, Missouri Conserv. Comm., Jefferson City, 25 pp.
- 111. Feast, C.N. Jr. 1938. Stream improvement and fish planting plans in the National Forests of the Central Rocky Mountain Region. Trans. 3rd N. Am. Wildl. Conf.: 428-432.
- 112. Finley, W.L. 1937. Fish protection and the industrial use of waters. Trans. 2nd N. Am. Wildl. Conf.: 97-101.
- 113. Flick, W.A. 1976. A stream improvement project. Pages 2-6 in Stream management of salmonids, Supplement to the Winter 1976 edition of Trout.
- 114. Fox, C.K. 1965. Guide to stream improvement. Sports Afield 154(2): 30-31, 56-59.
- 115. Fox, K.M. 1977. Importance of riparian ecosystems: economic considerations. Pages 19-22 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.

- 116. Fraser, F.J. and T.G. Halsey, 1969. The application of an air-percolation system for water temperature reduction in Robertson Creek. Canadian Fish Cult. 40: 41-49.
- 117. Fraser, J.C. 1972a. Regulated stream discharge for fish and other aquatic resources an annotated bibliography. FAO Fish. Tech. Paper No. 112. 103 pp.
- 118. Fraser, J.C. 1972b. Water levels, fluctuations, and minimum pools in reservoirs for fish and other aquatic resources: an annotated bibliography. FAO Fish. Tech. Pap. No. 113. 42 pp.
- 119. Gangmark, H.A. 1960. A comparative study of unstable and stable (artificial channel) spawning areas for incubating king salmon at Mill Creek. California Fish and Game (46(2): 151-164.
- 120. Gard, R. 1961. Creation of trout habitat by constructing small dams. J. Wildl. Manage. 25(4): 384-390.
- 121. Gard, R. 1961. Effects of beaver on trout in Sagehen Creek, California. J. Wildl. Manage. 25(3): 221-242.
- 122. Gaufin, A.R. 1973. Water quality requirements of aquatic insects. U.S. Environ. Protect. Agency, Ecol. Res. Serv., EPA-660/B-73-004. 39 pp.
- 123. Gee, M. 1952. Fish stream improvement handbook. U.S. Dep. Agri., Forest Serv., Washington, D.C. 21 pp.
- 124. Gibbons, D.R., and E.D. Salo. 1973. An annotated bibliography of the effects of logging on fish of the western United States and Canada. U.S. Dep. Agric., For. Serv., Gen. Tech. Rept. PNW-10. 145 pp.
- 125. Giger, R.D. 1973. Streamflow requirements of salmonids. Oregon Wildl. Comm., Federal Aid Proj. No. AFS-62-1. 117 pp.
- 126. Gilbert, W.F. 1970. River bank protection. J. Inst. Water Eng. 24(3): 178-180.
- 127. Glinsky, R.L. 1977. Regeneration and distribution of sycamore and cottonwood trees along Sonoita Creek, Santa Cruz County, Arizona. Pages 116-123 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 128. Goddard, J.E. 1971. Flood-plain management must be ecologically and economically sound. Civil Eng. (ASCE) 41: 81-85.

- 129. Goldman, C.R. 1973. Environmental impact and water development, p. 1-11.

 In C.R. Goldman, J. McEvoy III, and P.J. Richerson (Eds.).

 Environmental quality and water development, W.H. Freeman and Co., San Francisco.
- 130. Gottschalk, L.C. 1962. Effect of watershed protection measures on reduction of erosion and sediment damage in the United States. Int. Assoc. Sci. Hydrology. Comm. Land Erosion, Publ. 59: 426-447.
- 131. Greeley, J.R. 1935. Progress of stream improvement work in New York State. Trans. Am. Fish. Soc. 65(1935): 316-321.
- 132. Greeley, J.R. 1936. Lake and stream improvement in New York. Proc. 2nd N. Am. Wild. Conf.: 434-439.
- 133. Greene, C.W. and J.R. Greeley. 1938. Development of trout stream resources. Trans. 3rd N. Am. Wildl. Conf.: 315-322.
- 134. Greene, G.E. 1950. Land use and trout streams. J. Soil and Water Conserv. 5: 125-126.
- 135. Greentree, W.J. and R.C. Aldrich. 1976. Evaluating stream trout habitat on large-scale aerial color photographs. U.S. Dep. Agri., Forest Serv., Res. Pap. PSW-123. 21 pp.
- 136. Grim, E. and R. Hill. 1974. Environmental protection in surface mining of coal. U.S. Environ. Protect. Agency, Nat. Environ. Res. Center, Cincinnati, Ohio. EPA-670/2-74-093. 275 pp.
- 137. Grizzell, R.A. 1976. Flood effects on stream ecosystems. J. Soil and Water Conserv. 31(6): 283-285.
- 138. Gunderson, D.R. 1968. Floodplain use related to stream morphology and fish populations. J. Wildl. Manage. 32(3): 507-514.
- 139. Hagen, G.O. 1954. Experiments in stream improvement. Wyoming Wildl. 18(3): 10-14.
- 140. Hale, J.G. 1969. An evaluation of trout stream habitat improvement in a north shore tributary of Lake Superior. Minnesota Fish. Invest. No. 5: 37-50.
- 141. Hansen, E.A. 1968. Stabilizing eroding stream banks. U.S. Dep. Agri., Forest Serv., Res. Pap. NC-21. 12 pp.
- 142. Hansen, E.A. 1971. Sediment in a Michigan trout stream; its source, movement, and some effects on fish habitat. U.S. Dep. Agri., Forest Serv., Res. Pap. NC-59. 14 pp.

- 143. Hansen, E.A. 1973. In-channel sedimentation basins a possible tool for trout habitat management. Progr. Fish-Cult. 35(3): 138-142.
- 144. Hansen, E.A. and G. Alexander. 1976. Effect of an artificially increased sand bedload on stream morphology and its implications on fish habitat. Pages 3-65 to 3-76 in Third Fed. Inter-Agency Sedimentation Conf., Proc., Denver, CO.
- 145. Hanson, G.E. 1965. Stream and lake survey: District 2 northeast
 West Virginia stream improvement. Federal Aid Proj. F-010-R-06,
 Job 3/PTN, West Virginia Division Game and Fish, Charleston, 16 pp.
- 146. Harrison, J.S. 1963. Statewide fisheries investigations: Fisheries investigations in District No. 2, evaluation of stream improvement structures. New Mexico Dep. Game and Fish, Santa Fe, 15 pp.
- 147. Harrison, J.S. 1965. Evaluation of stream improvement structures, Fed. Aid Proj. F-22-R-6, New Mexico Fish and Game, Santa Fe.
- 148. Hart, G.E., A.R. Southard, and J.S. Williams. 1973. Influence of vegetation and substrate on streamwater chemistry in northern Utah. Completion Rep., U.S. Dep. Int., Office Water Resour. Res., Proj. OWRR 017. 53 pp.
- 149. Haupt, H.F. 1959. A method for controlling sediment for logging roads.
 U.S. Dep. Agri., Forest Serv., Intermountain Forest and Range Exp.
 Sta., Ogden, Utah. 27 pp.
- 150. Hazzard, A.S. 1937. Results of stream and lake improvement in Michigan. Trans. 2nd N. Am. Wildl. Conf.: 620-624.
- 151. Hazzard, A.S. 1948. Stocking vs. environmental improvement. Michigan Conserv. 17(17): 3,14-15.
- 152. Herricks, E.E. and J. Cairns Jr. 1975. Stream rehabilitation through control of non-point sources of acid mine drainage. Pages 239-256 in Non-point sources of water pollution, Proc. of a Southeast Regional Conf.
- 153. Herrington, R.B. and D.K. Dunham. 1967. A technique for sampling general fish habitat charcteristics of streams. U.S. Dep. Agri., Forest Serv., Res. Pap. INT-41. 12 pp.
- 154. Heusmann, H.W. 1973. How to create wildlife habitat from highway construction. Catalyst 3(4): 17-19.
- 155. Hewitt, E.R. 1931. Better trout streams, their maintenance with special reference to trout habits and food supply. Chas. Scribner and Sons, New York. 140 pp.

- 156. Hewitt, E.R. 1934. Hewitt's handbook of stream improvement. The Marchbanks Press, New York. 82 pp
- 157. Hibbert, A.R. 1976. Percolation and streamflows in range and forest lands.
 Pages 61-72 in Watershed management on range and forest lands.
 Proc. 5th Workshop of the U.S./Aust. Rangelands Panel, Utah Water
 Res. Lab., Utah State Univ., Logan.
- 158. Hickman, G.L. 1973. An annotated index to statuatory operating authorities of the Bureau of Sport Fisheries and Wildlife. U.S. Dep. Int., Fish and Wildl. Serv., Washington, D.C. 39 pp.
- 159. Hill, D.M. 1974. Reclamation of damaged streams as a tool in resource management. Pages 96-101 in Proceedings of a symposium on trout habitat research and management, U.S. Forest Serv., Southeast. Forest Exp. Sta., Asheville, N.C.
- 160. Hooper, D.R. 1973. Evaluation of the effects of flows on trout stream ecology. Pacific Gas and Electric Co., Dep. Eng. Res., Emeryville, CA 97 pp.
- 161. Horton, J.S. 1977. The development and perpetuation of the permanent tamarisk type in the phreatophyte zone of the southwest. Pages 124-127 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 162. Hourston, W.F. and D. MacKinnon. 1957. Use of an artificial spawning channel by salmon. Trans. Am. Fish. Soc. 86(1956): 220-230.
- 163. Hubbard, J.P. 1977. Importance of riparian ecosystems: biotic considerations. Pages 14-18 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 164. Hubbs, C.L. 1932. The improvement of trout streams. Am. Forests 38(7): 394-395, 430-431.
- 165. Hubbs, C.L. 1936. Planting food for fish. Trans. 1st N. Am. Wildl. Conf. 460-464.
- 166. Hubbs, C.L., J.R. Greeley, and C.M. Tarzwell. 1932. Methods for the improvement of Michigan trout streams. Michigan Institute Fish., Res. Bull. 1. 54 pp.
- 167. Hubbs, C.L. C.M. Tarzell, and R.W. Eschmeyer. 1933. CCC Stream improvement work in Michigan. Trans. Am. Fish. Soc. 63(1933): 404-416.
- 168. Hubbs, C. et al. 1977. Fishes inhabiting the Rio Grande, Texas and Mexico, between El Paso and the Pecos confluence. Pages 91-97 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.

- Huber, E.E. 1974. Fish protection at intake structures and dams: guidance, screens, and collection devices: a selected bibliography with abstracts. Oak Ridge Nat. Lab., ORNL-EIS-74-67. 75 pp.
- 170. Hunt, R.L. 1968. Effects of habitat alteration on production, standing crops and yield of brook trout in Lawrence Creek, Wisconsin.

 Pages 281-312 in T.H. Northcote, ed., Symposium on salmon and trout in streams. H.R. MacMillan Lectures in Fish., Univ. British Columbia, Vancouver.
- 171. Hunt, R.L. 1971. Responses of a brook trout population to habitat development in Lawrence Creek. Wisconsin Dep. Nat. Resources, Tech. Bull. 48. 35 pp.
- 172. Hunt, R.L. 1976a. In-stream improvement of trout habitat. Pages 26-31 in Stream management of salmonids, Supplement to the Winter 1976 edition of Trout.
- 173. Hunt, R.L. 1976b. A long-term evaluation of trout habitat development and its relation to improving management-related research. Trans. Am. Fish. Soc. 105 (3): 361-364.
- Hunter, G.W., III, L.M. Thorpe, and D.E. Grosvenor. 1940. An attempt to evaluate the effect of stream improvement in Connecticut. Trans. 5th N. Am. Wildl. Conf.: 276-291.
- Huntsman, A.G. 1948. Fertility and fertilization of streams. J. Fish. Res. Bd. Canada 7(5): 248-253.
- 176. Huston, J.E. 1964. Hydroelectric development: Stream improvement to increase cutthroat spawning runs. Federal Aid Proj. F-029-E-02, Job 3, Montana Fish and Game Dep., Helena, 13 pp.
- 177. Hynes, H.B.N. 1970a. The ecology of flowing waters in relation to management. J. Water Pollut. Control Fed. 42: 418-424.
- 178. Hynes, H.B.N. 1970b. The ecology of running waters. Univ. Toronto Press, Toronto. 555 pp.
- 179. Irving, R.B. 1956. Silver Creek stream improvement. Fed. Aid Proj. F-15-D. Idaho Dep. Fish and Game, Boise. 21 pp.
- 180. Jackson, B.J. 1974. Stream bed stabilization in Enfield Creek, New York. New York fish and Game J. 21(1): 32-46.
- Jahn, L.R. 1973. Watershed program lacks ecological dimensions. Pages 182-185 in Charles R. Goldman, James McEvoy III, and Peter J. Richerson, eds. Environmental quality and water development, W.H. Freeman and Co., San Francisco.

- Jeppson, P. and R. Borovicka. 1971. Stream fisheries habitat structures constructed by state and federal agency cooperation. Slide and synchronized tape presentation. 101st Annu. Meet. Am. Fish. Soc., Salt Lake City, Utah. (4 pp. summary).
- 183. Jester, D. 1963. Stream improvements continue. New Mexico Wildl. 8(1): 18-19.
- Jester, D.B. and H.J. McKirdy. 1966. Evaluation of trout stream improvement in New Mexico. Annu. Conf. Western Assoc. State Game Fish Comm., Proc. 46: 316-333.
- Johnson, F.W. 1953. The protection of trout stream environment. U.S. Dep. Agri., Forest Serv., NOrthern Region. 15 pp.
- Johnson, R.L. 1967. Central Montana fisheries study: Evaluation of stream improvement structures. Federal Aid Proj. F-005-R-16, Job 3, Montana Fish and Game Dep., Helena, 12 pp.
- Johnson, R.R., L.T. Haight, and J.M. Simpson. 1977. Endangered species vs. endangered habitats: a concept. Pages 68-79 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 188. Kanaly, J. 1975. Stream improvement evaluation in the Rock Creek fishway, Carbon County. Wyoming Game and Fish Dep., Cheyenne, Proj. No. 5075-08-6602. 14 pp.
- 189. Kay, A.R. and R.B. Lewis. 1970. Passage of anadromous fish thru highway drainage structures. California State Div. Highways, Rep. No. RR-629110. 28 pp.
- 190. Kennedy, C.E. 1977. Wildlife conflicts in riparian management: water.
 Pages 52-58 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 191. Keller, E.A. 1977. The fluvial system: selected observations. Page 105
 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation
 and management of riparian habitat: a symposium, U.S. Dep. Agri.,
 Forest Serv. Gen. Tech. Rep. RM-43.
- 192. Kimbal, J. and F. Savage. 1977. Diamond Fork aquatic and range habitat improvement. U.S. Dep. Agri., Forest Serv., Provo, Utah. 19 pp.
- 193. Kimmel, W.G. and W.E. Sharpe. 1976. Acid drainage and the stream environment.

 Pages 21-25 in Stream management of salmonids, Supplement to the
 Winter 1976 edition of Trout.

- 194. Kindel, F. 1977. Environmental applications in Corps of Engineers work with reference to riparian vegetation management. Pages 113-115 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 195. Kittrell, F.W. 1969. A practical guide to water quality sutdies of streams. U.S. Dep. Int., Fed. Water Pollution Control Admin. CWR-5. 135 pp.
- 196. Knudsen, G.J. 1962. Relationship of beaver to forests, trout and wildlife in Wisconsin. Wisconsin Conserv. Dep., Tech. Bull. No. 25. 50 pp.
- 197. Kramer, R.W. 1967. Stream improvement on Hutchinson Creek. Fed. Aid Proj. 1-21-C-1, Washington Dep. Fish., Olympia. 13 pp.
- 198. Kunz, R.D. 1971. Evaluation of structures placed in the Weber River, Utah. M.E. Project, Brigham Young Univ., Provo, Utah. 46 pp.
- 199. Lagler, K.F. 1956. Freshwater fishery biology. W.C. Brown Co., Dubuque, Iowa.
- 200. Lantz, R.L. 1971. Guidelines for stream protection in logging operations.
 Oregon State Game Comm., Portland. 29 pp.
- 201. Lantz, R.L. 1976. Protection of salmon and trout streams in logging operations. Pages 14-20 in Stream management of salmonids, Supplement to the Winter 1976 edition of Trout.
- 202. Larse, R.W. 1971. Prevention and control of erosion and stream sedimentation from forest roads. Pages 76-83 in J.T. Krygier and J.D. Hall, Directors, Proc. Symp. Forest Land Uses and Stream Environ., Oregon State Univ., Corvallis.
- 203. Latta, W.C. 1972. The effects of stream improvement upon the anglers' catch and standing crop of trout in the Pigeon River, Otsego County, Michigan. Michigan Dep. Nat. Resources, Res. Development Rep. 265. Lansing, 57 pp.
- 204. Laursen, E.M. 1962. Scour at bridge crossings. Trans. Am. Soc. Civil Eng. 127: 166-209.
- 205. Lavagnino, S. 1974. Gabions guard river banks against 50,000 cfs flow. Civ. Eng. (NY) 44(5): 88-89.
- 206. Law, J.P. and G.V. Skogerboe. 1972. Potential for controlling quality of irrigation return flows. J. Environ. Res. 1(2): 140-145.

- 207. Lawler, T.A. 1971. Resource protection possibilities and alternatives in logging. Pages 84-85 <u>in</u> J.T. Krygier and J.D. Hall, Directors, Proc. Symp. Forest Land Uses and Stream Environ., Oregon State Univ., Corvallis.
- 208. Laycock, W. 1969. Exclosures and natural areas on rangelands in Utah. U.S. Dep. Agri., Forest Serv., Res. Pap. INT-62 44 pp.
- 209. Leonard, J.W. 1940. Some comments on stream improvement in Michigan. Michigan Conserv. 10(2): 6-7, 10.
- 210. Leopold, A.S. 1975. Ecosystem deterioration under multiple use. Pages 96-98 in W. King, ed., Wild trout management, Trout Unlimited, Inc., Denver.
- 211. Leopold, L.B. and T. Maddock Jr. 1953. Hydraulic geometry of stream channels and some physiographic implications. U.S. Geol. Sur., Prof. Pap. 252: 30-35.
- 212. Leopold, L.B., M.G. Wolman, and J.P. Miller. 1964. Fluvial processes in geomorphology. W.H. Freeman and Co., San Francisco. 522 pp.
- 213. Lewis, S.L. 1969. Physical factors influencing fish populations in pools of a trout stream. Trans. Am. Fish, Soc. 98(1): 14-19.
- 214. Lieberman, J.A. and M.D. Hoover. 1948. Protecting quality of stream flow by better logging. South. Lumberman 177 (2225: 236-240.
- 215. Liscom, K.L. 1971. Orifice placement in gatewells of turbine intakes for bypassing juvenile fish around dams. Trans. Am. Fish. Soc. 100(2): 319-324.
- 216. Little, R.G. 1965. Evaluation of stream improvement structures on Eagle Creek. Fed. Aid Proj. F-22 R-5 & 6., New Mexico Dep. Game & Fish, Santa Fe.
- 217. Little, R.G. 1965. Evaluation of stream improvement structures on South Fork of Bonito Creek. Fed. Aid Proj. F-22-R-6, New Mexico Dep. Game and Fish, Santa Fe.
- 218. Little, R.G. 1966. Habitat improvement. New Mexico Wildl. 12(2): 12-13.
- 219. Lister, D.B. and C.E. Walker. 1966. The effect of flow control on freshwater survival of chum, coho, and chinook salmon in the Big Qualicum River. Canadian Fish Cult. 37: 3-22.
- 220. Lock, S.B. 1938. The role of anglers, organizations, bait dealers, land owners, government and commercial fishermen in a program of fish management. Trans. 3rd N. Am. Wildl. Conf.: 305-306.

- 221. Lorz, H. 1974. Ecology and management of brown trout in Little Deschutes River. Oregon Wildl. Comm., Fish. Res. Rep. No. 8. 51 pp.
- 222. Loudermilk, W.C. 1934. The role of vegetation in erosion control and water conservation. J. Forestry 32(5): 529-536.
- 223. Lovaas, A.L. 1970. People and the Gallatin elk herd. Montana Fish Game Dep., Helena. 44 pp.
- 224. Lowry, G.L. 1956. Five-year study evaluates forest tree varieties for spoil banks. Ohio Farm and Home Res. 41(307): 70-71.
- 225. Lowry, G.R. 1971. Effect of habitat alteration on brown trout in McKenzie Creek, Wisconsin. Wisconsin Dep. Nat. Resources, Res. Rep. 70. 27 pp.
- 226. Lucas, K.C. 1960. The Robertson Creek spawning channel. Canadian Fish Cult. 27: 3-23.
- 227. Lund, J.A. 1976. Evaluation of stream channelization and mitigation on the fishery resources of the St. Regis River, Montana. U.S. Fish and Wildl. Serv., Office Biol. Serv. FWS/OBS-76/06. 49 pp.
- 228. Lusby, G.C. 1970. Hydrologic and biotic effects of grazing versus nongrazing near Grand Junction, Colorado. U.S. Geol. Surv. Pap. 700-B: 232-236.
- 229. Lynch, J.A., E.S. Corbett, and R. Hoopes. 1977. Implications of forest management practices on the aquatic environment. Fisheries (Bull. Am. Fish. Soc.) 2(2): 16-22.
- 230. Madsen, M.J. 1938. A preliminary investigation into the results of stream improvement in the intermountain forest region. Trans. 3rd N. Am. Wildl. Conf.: 497-503.
- 231. MacCaferri Gabions of America. (1966). Stream improvement handbook.

 MacCaferri Gabions of America, Inc., Flushing, New York. 15 pp.
- 232. MacKinnon, D., L. Edgeworth, and R.E. McLaren. 1961. An assessment of Jones Creek spawning channel, 1954-1961. Canadian Fish Cult. 30: 3-14.
- 233. Marcuson, P. 1967. South central Montana fisheries study: Stream sediment investigation. Federal Aid Proj. F-020-R-11, Job 3, Montana Fish and Game Dept., Helena, 7 pp.
- 234. Marcuson, P. 1968. South central Montana fisheries study: Stream sediment investigation. Federal Aid Proj. F-020-R-13, Job 3, Montana Fish and Game Dept., Helena, 10 pp.

- 235. Marcuson, P. 1969. South central Montana fishery study: Stream sediment investigation. Federal Aid Proj. F-020-R-12, Job 3, Montana Fish and Game Dept., Helena, 9 pp.
- 236. Marriage, L.D. 1965. Salmonid developments in watershed protection and flood prevention projects in the western states. Annu. Conf. Western Assoc. Game Fish Comm., Proc. 45: 160-165.
- 237. McAllister, D.M. 1973. Environment: a new focus for land-use planning. Nat. Sci. Found., Washington, D.C. NSF/RA/E-74-001. 328 pp.
- 238. McCloskey, M. 1973. Alternatives in water project planning: ecological and environmental considerations, p. 425-437. In C.R. Goldman, J. McEvoy III, and P.J. Richerson (Eds). Environmental quality and water development, W.H. Freeman, and Co., San Francisco.
- 239. McCrimmon, H.R. and W.H. Kwain. 1966. Use of overhead cover by rainbow trout exposed to a series of light intensities. J. Fish. Res. Bd. Canada 23(7): 983-990.
- 240. McDowell, R.A. 1975. Fishery management investigations: Study of the Pole Mountain fishery: beaver pond, artificial impoundment and stream investigations. Wyoming Game and Fish Dep., Cheyenne. 185 pp.
- 241. McKee, J.E. and H.W. Wolf (Eds.). 1963. Water quality criteria. 2nd ed. California State Water Qual. Contr. Bd. Pub. No. 3-A 548 pp.
- 242. McKirdy, H.J. 1964. Evaluation of stream improvement structures. Final Rep. 2600 Wildlife Management, U.S. Dep. Agri., Forest Serv., Washington, D.C.
- McSwain, K.R. and R.E. Schmidt. 1976. Gabions, perforated pipe and gravel serve as fish screens. Civ. Eng. (NY) 46(5): 73.
- Meehan, W.R., F.J. Swanson, and J.R. Sedell. 1977. Influences of riparian vegetation on aquatic ecosystems with particular reference to salmonid fishes and their food supply. Pages 137-145 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 245. Merrill, A. 1934. Instructions for stream improvement in Massachusetts.

 Massachusetts Div. Fish. and Game, Boston.
- 246. Menendez, R. 1975. Results of two years of creel census on Otter Creek, a naturally acid stream treated with limestone. West Virginia Acad. Sci., Proc. 49: 155-158.
- 247. Migel, M.J. (ed.). 1974. The stream conservation handbook. Crown Publ., Inc., New York. 242 pp.

- 248. Miles, R.L. 1969. Stream and lake survey: Stream improvement. Federal Aid Proj. F-010-R-10, Job 2 Pt. 1, West Virginia Div. Game and Fish, Charleston, 8 pp.
- 249. Montgomery, J.M. (Consulting Eng., Inc.). Forest harvest, residue, treatment, reforestation and protection of water quality. U.S. Environ. Protect. Agency, Seattle, Wash., EPA 910/9/76-020. 312 pp.
- 250. Moore, C.M., W.J. Wood, and G.W. Renfro. 1960. Trap efficiency of reservoirs, debris basins and debris dams. ASCE Hydraulic Div. J. 86 (HY 2): 69-87.
- 251. Moore, E., J.R. Greeley, C.W. Greene, H.M. Faigenbaum, F.R. Nevin, and H.K. Townes. 1934. A problem in trout stream management. Trans. Am. Fish. Soc. 64(1934): 68-80.
- 252. Morisawa, M. 1968. Streams, their dynamics and morphology. McGraw-Hill, New York. 175 pp.
- 253. Morton, J.W. 1977. Ecological effects of dredging and dredge spoil disposal: a literature review. U.S. Fish and Wildl. Serv., Tech. Pap. 94. 33 pp.
- 254. Morton, R.C.B., and G.G. Stamm. 1975. Critical water problems facing the eleven western states, westwide study. Report, U.S. Dep. Inter., Bur. Reclam., Denver, Colorado. 457 pp.
- 255. Mueller, J.W. 1954. Wyoming stream improvement. Wyoming Wildl. 18(5): 30-32.
- 256. Mueller, J.W. 1970. Tongue River fish populations as related to channel alterations. Wyoming Game and Fish Dep., Cheyenne, Proj. No. 0369-07-6802. 7 pp.
- 257. Muir, J.F. 1959. Passage of young fish through turbines. Proc. Am. Soc. Civil Eng. 85(PO 1): 23-46.
- 258. Mullan, J.W. 1960. Trout stream management in Massachusetts. Massachusetts Div. Fish and Game, Boston. 95 pp.
- 259. Mullan, J.W. 1961. Stream improvement prospectus for the streams of the George Washington National Forest. Unpub. Ms., U.S. Fish and Wildl. Serv., Virginia. 13 pp.
- 260. Mullan, J.W. 1962. Is stream improvement the answer? Virginia Wildl. 23(10): 18-19.
- 261. Mullan, J.W. and H. Barrett. 1962. Trout, floods and gabions. Virginia Wildl. 23(1): 18-19.

- 262. Narver, D.W. 1973. Are hatcheries and spawning channels alternatives to stream protection? Fish. Res. Bd. Canada, Pacific Biol. Sta. Nanaimo, British Columbia, Circ. No. 93. 11 pp.
- Navarre, R.J. 1962. A new stream habitat improvement structure in New Mexico. Trans. Am. Fish. Soc 91(2): 228-229.
- 264. Needham, P.R. 1936. Stream improvement in arid regions. Trans. 1st N. Am. Wildl. Conf.: 453-460.
- 265. Needham, P.R. 1969. Trout streams: conditions that determine their productivity and suggestions for stream and lake management.

 Holden-Day, Inc., San Francisco. 241 pp. (Needham's 1938 book revised by Carl Bond in 1969).
- 266. Nelson, P.H. 1958. Southeast Montana fishery study: ACP program for Rock Creek. Federal Aid Proj. F-029-1-01, Job 1, Montana Fish and Game Dept., Helena, 11 pp.
- 267. Newell, A.E. 1958. Trout stream management: Investigations of the Swift River watershed in Albany, New Hampshire. New Hampshire Fish and Game Dep. Surv. Rep. 7. 40 pp.
- 268. Newton, M. and J.A. Norgren. 1977. Silvicultural chemicals and protection of water quality. U.S. Environ. Protect. Agency, Seattle, Wash., EPA 910/9-77-036. 224 pp.
- 269. Nesbit, R.J. 1961. Stream flow maintenance dams in the Sierra pay dividends.
 Outdoor California 22(9-10): 2.
- 270. Nobel, E.L. and L.J. Lundeen, 1971. Analysis of rehabilitation treatment alternatives for sediment control. Pages 86-96 in J.T. Krygier and J.D. Hall, Directors, Proc. Symp. Forest Land Uses and Stream Environ., Oregon State Univ., Corvallis.
- 271. Novitzki, R.P. 1973. Improvement of trout streams in Wisconsin by augmenting low flows with ground waters. U.S. Geol. Surv., Water Supply Pap. No. 2017. 52 pp.
- 272. Nowell, H.C. 1962. Trout stream investigations: Trout stream reclamation studies on the Big River watershed. Federal Aid Proj. F-005-R-10, Job 1, New Hampshire Fish and Game Dept., Concord, 36 pp.
- 273. Ohmart, R.D., W.O. Deason, and S.J. Freeland. 1975. Dynamics of marsh land formation and succession along the lower Colorado River and their importance and management problems as related to wildlife in the arid southwest. Trans. 45th N.A. Wildl. and Nat. Resources Conf.: 240-251.

- 274. Ohmart, R.D., W.O. Deason, and C. Burke. 1977. A riparian case history: the Colorado River. Pages 35-47 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. Rm-43.
- Omernik, J.M. 1976. The influence of land use on stream nutrient levels.
 U.S. Environmental Protect. Agency, Ecol. Res. Series, EPA-600/3-76-014. 105 pp.
- Orsborn, J.F. and C.H. Allman (eds.). 1976. Proceedings of the symposium and speciality conference on instream flow needs. Am. Fish. Soc., Washington, D.C. Vol. I 551 pp.; Vol. II 657 pp.
- Otis, M. (1958). Guide to stream improvement. New York Dep. Environ. Conserv., Information Leaflet. 19 pp.
- Owens, W.E. 1938. Program of stream improvements and public fishing easements by State of Ohio Division of Conservation. Trans. 3rd N. Am. Wildl. Conf.: 325-330.
- Packer, P. 1951. An approach to watershed protection criteria. J. Forestry 49(9): 639-644.
- Packer, P.E. 1953. Effects of trampling disturbance on watershed condition, runoff, and erosion. J. Forestry 51: 28-31.
- Packer, P.E. 1958. Management of forest watersheds and improvement of fish habitat. Trans. Am. Fish. Soc. 87(1957): 392-397.
- Parsons, D. 1963. Vegetative control of stream bank erosion. Pages 130-136.

 in Second Fed. Inter-Agency Sedimentation Conf., Proc., U.S. Dep.

 Agri. Misc. Publ. 970.
- Pase, C.P. and E.F. Layser. 1977. Classification of riparian habitat in the southwest. Pages 5-9 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- Patterson, D.W. 1976. Evaluation of habitats resulting from stream bank protection projects in Siskiyou and Mendocino Counties, California. Cal-Neva Wildl. Trans. 1976: 53-59.
- Patton, D.R. 1973. A literature review of timber-harvesting effects on stream temperature: research needs for the southwest. U.S. Dep. Agri., Forest Serv., Res. Note RM-249. 4 pp.
- Patton, D.R. 1977. Riparian research needs. Pages 80-82 <u>in</u> R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Service Gen. Tech. Rep. RM-43.

- 287. Pennsylvania Fish Commission. 1974. Stream improvement guide. Pennsylvania Fish Comm., Harrisburg. 21 pp.
- 288. Perry, E.W. 1974. The effect of stream improvement structures on the sport fishery in a channelized section of the Olentangy River. M.S. Thesis, Ohio State Univ., Columbus. 130 pp.
- Peters, J.C. 1967. Effects on a trout stream of sediment from agricultural practices. J. Wildl. Manage. 31(4): 805-812.
- 290. Peters, J.C. 1976. Control of water pollution during dam and tunnel construction. Annu. Conf. Western Assoc. Game Fish Comm., Proc. 56: 246-256.
- 291. Peters, J.C. and W. Alvord. 1964. Man-made channel alterations in thirteen Montana streams and rivers. Trans. 29th N. Am. Wildl. and Nat. Resources Conf.: 93-102.
- 292. Platts, W.S. 1960. Investigations of specific problems of the Utah fishery: Investigations of Strawberry Reservoir tributaries. Federal Aid Proj. F-004-R-04, Job P, Utah State Dep. Fish and Game, Salt Lake City. 67 pp.
- 293. Platts, W.S. and W.R. Meehan. 1977. Livestock grazing and fish environments: situation and needs. <u>In</u> Symposium on livestock interactions with wildlife, fisheries, and their environments, U.S. Dep. Agri., Forest Serv., Sparks, Nevada. 13 pp.
- 294. Poelke, R.J. and I.O. Buss. 1972. Habitat improvement the way to higher wildlife populations in southeast Washington. Northwest Sci. 46(1): 25-31.
- Pollock, R.D. 1969. Tehama-colusa canal to serve as spawning channel. Progr. Fish-Cult. 31(3): 123-130.
- 296. Potter, D.R. and J.A. Wagar. 1971. Techniques for inventorying man-made impacts in roadway environments. U.S. Dep. Agri., Forest Serv., Res. Paper PNW-121. 12 pp.
- 297. Powell, J.F. 1961. Stream reclamation increases bass population in northern panhandle streams. West Virginia Conserv. 25(7): 22-23.
- 298. Pyle, A.B. and K.R. Compton. 1963. Research in trout management: Acid water trout studies. Federal Aid Proj. F-020-R-01, Job 2, New Jersey Div. Fish and Game, Trenton, 26 pp.
- 299. Redding, M.J. 1973. Aesthetics in environmental planning. Environ.
 Protection Agency, Socioeconomic Environ. Studies Series, EPA-600/5-73-009. 187 p.

- 300. Regan, D.M. 1965. Ecology of the Gila Trout, <u>Salmo gilae</u>, in Main Diamond Creek, New Mexico. M.S. Thesis, Colorado State Univ., Fort Collins. 57 pp.
- 301. Reinhart, K.G., A.R. Eschner, and G.R. Trimble Jr. 1963. Effects on streamflow of four forest practices in the mountains of West Virginia. U.S. Dep. Agri., Forest Serv., Res. Pap. NE-1. 76 pp.
- 302. Richard, J.B. 1963. Log stream improvement devices and their effects upon the fish population, South Fork Mikelumne River, Calaveras County. Inland Fish. Admin. Rep. No. 63-7, California Dep. Fish and Game, Sacramento. 11 pp.
- 303. Ritzler, R. 1936. Stream improvement as related to erosion. Proc. 1st N. Am. Wildl. Conf.: 464-468.
- Robichaux, R. 1977. Geological history of the riparian forests of California.

 Pages 100-111 <u>in</u> R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 305. Robinson, D.W. 1969. The stream disturbance problem and our fishery resources -- its scope and a method of evaluation and response.

 Annu. Conf. Southeast. Assoc. Game Fish Comm., Proc. 23: 3-8.
- Robinson, D. 1962 Devices for better fishing. West Virginia Conserv. 26(2): 16-21.
- 307. Robinson, D. and R. Menendez. 1964. Stream improvement on three northwestern West Virginia warm water streams. Final Rep., Fed. Aid Proj. DJ F-10-R, West Virginia Dep. Nat. Resources, Charleston. 18 pp.
- 308. Rounsefell, G.A. and W.H. Everhart. 1953. Fishery science: its methods and applications. John Wiley & Sons, Inc., New York. 444 pp.
- 309. Sands, A. and G. Howe. 1977. An overview of riparian forests in California: their ecology and conservation. Pages 98-99 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium, U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- 310. Saunders, J.W. and M.W. Smith. 1962. Physical alteration of stream habitat to improve trout production. Trans. Am. Fish. Soc. 91(2): 185-188.
- 311. Saunders, J.W. and M.W. Smith. 1965. Changes in a stream population of trout associated with increased silt. J. Fish. Res. Bd. Canada 22(2): 395-404.

- 312. Schuder, G.D. Sr. 1974. Our vanishing trout streams a southern
 Appalachian dilemma. Pages 14-17 <u>in</u> Proceedings of a symposium on
 trout habitat research and management, U.S. Forest Serv., Southeast.
 Forest Exp. Sta., Asheville, S.C.
- Seamons, R.G. 1959. Trout stream management: Investigations of the Saco River, New Hampshire. New Hampshire Fish and Game Dep. Surv. Rep. 9 Concord, 71 pp.
- Sharma, R.K. 1973. Fish protection at water diversions and intakes:

 a bibliography of published and unpublished references. Argonne Nat.
 Lab., Argonne, Illinois. ANL/ESP-1, 33 pp.
- Shelton, J.M. and R.D. Pollock. 1966. Siltation and egg survival in incubation channels. Trans. Am. Fish. Soc. 95(2): 183-187.
- Shetter, D.S., O.H. Clark, and A.S. Hazzard. 1949. The effects of deflectors in a section of a Michigan trout stream. Trans. Am. Fish. Soc. 76(1946): 248-276.
- 317. Silcox, F.A. 1936. Fish stream improvement handbook. U.S. Dep. Agri., Forest Serv., Washington, D.C. 39 pp.
- Simons, D.B. 1975. The geomorphic and hydraulic response of rivers.

 Trans. 40th N.A. Wildl. Nat. Resources Conf.: 209-219.
- 319. Skovlin, J.M., W.R. Meehan, J.C. Buckhouse, and M. Vavra. 1977. A method of study for determining the influence of grazing on riparian and aquatic habitats in the Blue Mountains of eastern Oregon and Washington.

 In Symposium on livestock interactions with wildlife, fisheries, and their environments, U.S. Dep. Agri., Forest Serv., Sparks, Nevada. 23 pp.
- 320. Smeins, F.E. 1975. Effects of livestock grazing on runoff and erosion.

 <u>In A symposium on watershed management</u>, Proc. Irrigation and Drainage
 <u>Div.</u>, Am. Soc. Civil Eng., Logan, Utah: 267-274.
- 321. Smith, A.K. 1973. Development and application of spawning velocity and depth criteria for Oregon salmonids. Trans. Am. Fish. Soc. 102(2): 312-316.
- 322. Smith, E.V. and H.S. Swingle. 1950. Ponds for improving stream fishing.
 Alabama Polytechnic Institute, Agri. Exp. Sta., Leaflet No. 20.
 7 pp.

- 323. Smith, O. 1940. Placer mining silt and its relation to salmon and trout on the Pacific coast. Trans. Am. Fish. Soc. 69: 252-261.
- 324. Soil Conservation Service. 1971. Planning and design of open channels. U.S. Dep. Agri., Soil Conserv. Serv., Tech. Rep. 25. 12 pp.
- 325. Soil Conservation Service. 1971. Guidelines for planning and review of channel improvements. U.S. Dep. Agri., Soil Conserv. Serv., Watersheds Memo. 108. 6 pp.
- 326. Stalnaker, C.B., and J.L. Arnette. (Eds.) 1976. Methodologies for the determination of stream resource flow requirements: an assessment. U.S. Fish and Wildl. Serv., Office Biol. Serv., West. Water Allocation, Washington, D.C. 199 pp.
- 327. Stoeckeler, J.H. and G.J. Voskuil. 1959. Water temperature reduction in shortened spring channels of southwestern Wisconsin trout streams. Trans. Am. Fish. Soc. 88(4): 286-288.
- 328. Surber, E.W. 1961. Improving sport fishing by control of aquatic weeds.
 U.S. Fish and Wildl. Serv., Circ. 128. 37 pp. appendices.
- Swartz, A.H. 1947. An outline of stream improvement possibilities for Massachusetts. Massachusetts Dep. Conserv., Div. Fish and Game, Boston. 30 pp.
- 330. Swift, L.W. Jr. and S.E. Baker. 1973. Lower water temperatures within a streamside buffer strip. U.S. Dep. Agri., Forest Serv., Res. Note SE-193. 7 pp.
- 331. Swift, L.W. Jr. and J.B. Messer. 1971. Forest cuttings raise temperatures of small streams in the southern Appalachians. J. Soil and WAter Conserv. 26: 111-116.
- 332. Sylvester, J.R. 1972. Possible effects of thermal effluents on fish: a review. Environ. Pollution 3(3): 205-215.
- Symons, J.M., S.R. Weibel, and G.G. Robeck. 1964. Influence of impoundments on water quality: a review of literature and statement of research needs. U.S. Public Health Serv. Publ. No. 999-WP-18. 78 pp.
- Tarzwell, C.M. 1931. Trout stream improvement in Michigan. Trans. Am. Fish. Soc. 61(1931): 48-57.
- Tarzwell, C.M. 1935. Progress in lake and stream improvement. Trans. Am. Game Conf. 21: 119-134.

- 336. Tarzwell, C.M. 1936. Environmental improvement in trout streams: a problem in applied ecology. Ph. D Thesis, Univ. Michigan, Ann Arbor
- 337. Tarzwell, C.M. 1936. Lake and stream improvement in Michigan. Trans.
 1st N. Am. Wildl. Conf.: 429-434.
- Tarzwell, C.M. 1937. Experimental evidence on the value of trout stream improvement in Michigan. Trans. Am. Fish. Soc. 66(1936): 177-187.
- Tarzwell, C.M. 1938. Factors influencing fish food and fish production in southwestern streams. Trans. Am. Fish. Soc. 67(1939): 246-255.
- Tarzwell, C.M. 1938. An evaluation of the methods and results of stream improvement in the southwest. Trans. 3rd N. Am. Wildl. Conf.: 339-364.
- Tebo, L. 1955. Effects of siltation, resulting from improper logging on the bottom fauna of a small trout stream in the southern Appalachians. Progr. Fish-Cult. 17(2): 64-71.
- Tebo, L.B. Jr. 1957. Effects of siltation on trout streams. Soc. Am. For. Proc. 1956: 198-202.
- Tebo, L.B. Jr. 1974. Review of selected parameters of trout stream quality.

 Pages 20-32 <u>in Proceedings of a symposium on trout habitat research and management</u>, U.S. Forest Serv., Southeast. Forest Exp. Sta., Asheville, N.C.
- Tennant, D. 1976. Instream flow regimens for fish, wildlife, recreation and related environmental resources. Fisheries (Bull. Am. Fish. Soc.) 1(4): 6-10.
- Teskey, R.O. and T.M. Hinckley. 1977. Impact of water level changes on woody riparian and wetland communities. Vol. I: Plant and soil responses to flooding. U.S. Fish and Wildl. Serv., Biol. Serv. Program, FWS/OBS-77/58. 30 pp.
- Thompson, K. 1977. Riparian forest of the Sacramento Valley, California.

 Pages 101-105 in R.R. Johnson and D.A. Jones, Tech. Coord., Importance, preservation and management of riparian habitat: a symposium,

 U.S. Dep. Agri., Forest Serv. Gen. Tech. Rep. RM-43.
- Tinkler, K.S. 1970. Pools, riffles, and meanders. Bull. Geol. Soc. Am. 81: 547-552.
- 348. Tippy, R. 1968. Preservation values in river basic planning. Nat. Resources 8(2): 259-278.

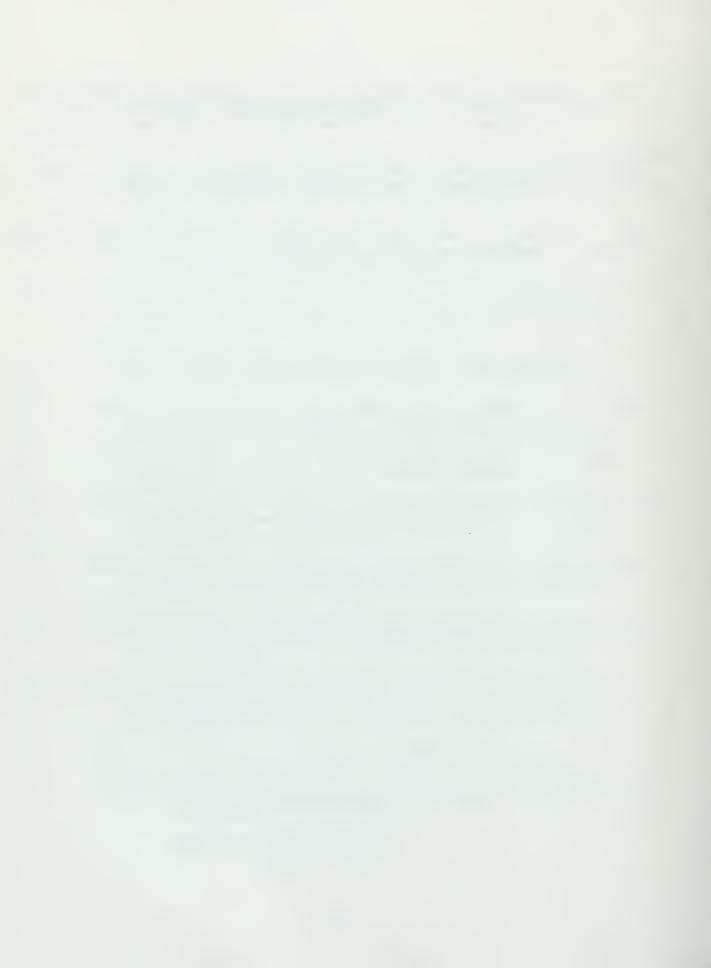
- Tobiaski, R.A. and N.R. Tripp. 1961. Gabions for stream and erosion control. J. Soil Water Conserv. 16(16): 284-285.
- Todd, D.J. 1972. Effects of low gabion dams on primary production in high altitude streams. J. Colorado-Wyoming Acad. Sci. 7(2-3): 86.
- Townsend, J.E. and R.J. Smith (Eds.). 1977. Improving fish and wildlife benefits in range management. U.S. Fish and Wildl. Serv., Biol. Serv. Program, FWS/OBS-77/1. 118 pp.
- 352. Trautman, M.B. and D.K. Gartman. 1974. Re-evaluation of the effects of man-made modification on Grodon Creek between 1887 and 1973 and especially as regards its fish fauna. Ohio J. Sci. 74(3): 162-173.
- Turner, D.J. 1971. Dams and ecology: can they be made compatible? Civil Eng. 41(8): 76-80.
- Tyner, E.H. and R.M. Smith. 1945. The reclamation of the strip-mined coal lands of West Virginia with forest species. Soil Sci. Am., Proc. 10: 429-436.
- 355. Tyner, E.H., R.M. Smith, and S.L. Galpin. 1948. Reclamation of strip-mined areas of West Virginia. J. Am. Soc. Agron. 40: 313-323.
- 356. Unruh, B.H. and P.E. Giguere. 1955. Living room for trout. Outdoor California 16(12): 4-5.
- 357. Uppal, H.L. 1966. Sediment control in rivers and canals. Central Bd. Irrigation and Power, New Delhi, India, Publ. No. 79. 320 pp.
- 358. U.S. Environmental Protection Agency. 1973. Environmental impact statement guidelines. U.S. Environ. Protection Agency, Region X, Seattle, Washington. 121 pp. + attachments.
- 359. U.S. Forest Service. 1969. Stream improvement. U.S. Dep. Agri., Forest Serv., FSH 2609.11 Wildlife habitat improvement handbook. Chapt. 10. 80 pp.
- Won Gunten, G.H. 1961. Fish passage through hydraulic turbines. Proc. Am. Soc. Civil Eng. (HY 3): 59-72.
- 361. Ward, J.V. 1976. Effects of flow patterns below large dams on stream benthos: a review. Pages 235-253 in J.F. Orsborn and C.H. Allman (eds.)., Proceedings, Symposium and speciality conference, instream flow needs, Volume 2, American Fisheries Society, Washington, D.C.

- 362. Warner, K. and I.R. Porter. 1960. Experimental improvement of a bulldozed trout stream in northern Maine. Trans. Am. Fish. Soc. 89(1): 59-63
- 363. Warren, C.E., J.H. Wales, G.E. Davis and P. Doudoroff. 1964. Trout production in an experimental stream enriched with sucrose. J. Wildl. Manage. 28(4): 617-660.
- 364. Warren, C.E. 1971. Biology and water pollution control. W.B. Saunders and Company, Philadelphia, Pa. 434 pp.
- 365. Waters, T.F. 1958. The effect of stream improvement upon the catch and post-season standing crop of trout in the Pigeion River. Michigan Inst. Fish. Res., Rep. 1541.
- 366. Waters, T.F. 1969. Invertebrate drift-ecology and significance to stream fishes. Pages 121-134 in T.G. Northcote, ed. Symposium on salmon and trout in streams. H.R. MacMillan Lectures in Fish., Univ. British Columbia, Vancouver.
- 367. Webster, D.A. 1962. Artificial spawning facilities for brook trout, Salvelinus fontinalis. Trans. Am. Fish. Soc. 91(2): 168-174.
- 368. Wesche, T.A. 1973. Parametric determination of minimum stream flow for trout. Water Resour. Res. Instr., Univ. Wyoming, Laramie, 102 pp.
- 369. Wesche, T.A. 1974. Evaluation of trout cover in smaller streams. Annu. Conf. Western Assoc. Game Fish Comm., Proc. 54: 286-294.
- 370. White, H.C. 1942. Atlantic salmon redds and artificial spawning beds. J. Fish. Res. Bd. Canada 6(1): 37-44.
- 371. White, R.J. 1968. Stream improvement. Pages 106-110 in R.D. Teague, ed., A manual of wildlife conservation, The Wildl. Soc., Washington, D.C.
- White, R.J. 1973. Stream channel suitability for cold water fish. Annu. Meeting Soil Conserv. Soc. Am., Proc. 28: 61-79.
- 373. White, R.J. 1975. In-stream management for wild trout. Pages 48-57 in W. King, ed., Wild trout management, Trout Unlimited, Inc., Denver, Colorado.
- 374. White, R.J. and O.M. Brynildson. 1967. Guidelines for management of trout stream habitat in Wisconsin. Wisconsin Dep. Nat. Resources, Tech. Bull, 39. 65 pp.

- 375. Whitney, A.N. 1975. Creel, size, seasons, and angling methods the manager's viewpoint. Pages 64-66 in W. King, ed., Wild trout management, Trout Unlimited, Inc., Denver.
- 376. Wicklund, R.G. and W.M. Spaulding. 1962. Watershed surveys and management plans: Effects of stream improvement devices on the standing crop of trout in one stretch of the Platte River, Benzie County, Michigan. Federal Aid Proj. F-004-R-08, Job E, Michigan Dep. Conserv., Lansing, 13 pp.
- 377. Wilhm, J.L., and T.C. Dorris. 1968. Biological parameters for water quality control. Biscience 18(6):477-481.
- 378. Wilkins, L.P. 1958. Construction and evaluation of stream alteration structures. Fed. Aid Proj. F-6-R. Tennesse Game and Fish Comm., Nashville. 20 pp.
- 379. Williams, C. 1962. The exclosure -- a tool of range management.
 Wyoming Range Manage., Issue 165. 2pp.
- 380. Winegar, H.H. 1977. Camp Creek channel fencing plant, wildlife, soil, and water response. Rangeman's J. 4(1): 10-12.
- 381. Winget, R.L. 1949. The pulp and paper industry's stream improvement program. Trans. Am. Fish. Soc. 77(1947): 262-270.
- 382. Witten, A.L. Jr. 1975. Study of the impact of selected bank stabilization structures on game fish and associated organisms. M.S. Thesis, Iowa State Univ., Ames. 122 pp.
- 383. Woods, L.C. III. 1977. Effect of stream channelization and mitigation on warmwater macroinvertebrate communities. M.S. Thesis, Ohio State Univ., Columbus. 88 pp.
- 384. Workman, D. 1975. An evaluation of stream improvements on Prickly Pear Creek. Annu. Conf. Western Assoc. State Game and Fish Comm., Proc. 55: 275-283.
- 385. Wyoming Game and Fish Department. 1976. Considerations for wildlife in industrial development and reclamation. Wyoming Game and Fish Dep., Cheyenne. 68 pp.
- 386. Yang, C.T. 1971. On river meanders. J. Hydrol. 13(3): 231-253.
- Young, A.A. and H.F. Blaney. 1942. Use of water by native vegetation.
 California Dep. Public Works, Div. Water Resour., Sacramento. 160 pp.

- Zeigler, E.R. 1967. An artificially produced velocity barrier for controlling fish movement: Tehama-Colusa Canal. U.S. Bureau Reclamation, Off. Chief Eng., Denver, Colorado, Rep. No. Hyd-579. 32 pp.
- Zilliox, R.G. and W. Pfeiffer. 1956. Restoration of brook trout fishing in a chain of connected waters. New York Fish and Game J. 3(2): 167-190.
- 390. Zurbuck, P.E. 1963. Dissolving limestone from revolving drums in flowing water. Trans. Am. Fish. Soc. 92(2): 173-178.

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